METHOD AND APPARATUS FOR SYNTHESIZING A HARDWARE SYSTEM FROM A SOFTWARE DESCRIPTION

Abstract

A method and an apparatus take software source code to synthesize a hardware platform for running the software. The method determines which processor is suitable for running the code and meeting the performance parameters determined by the user. The method also determines which hardware devices are accessed by software. If the hardware target is a semiconductor chip, the invention selects the appropriate IP and creates an HDL description of the chip. If the hardware target is a printed circuit board, the invention creates a schematic or netlist that includes the appropriate microprocessor, the various semiconductor chips, and the necessary interconnections.